GlasGrid® 8502
Pavement Reinforcement System

CASE STUDY

PROJECT: Ontario County Road 41 (locally referred to as Shortsville Rd)

LOCATION: Farmington NY, (between State Route 332 & Co. Rd. 8)

ISSUE: Controlling pavement cracking on urban arterial roadways

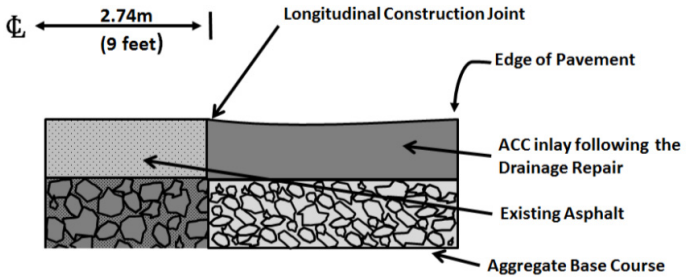
SOLUTION: GlasGrid® 8502, GlasGrid® Pavement Reinforcement System (2@1.5 linear miles)

INSTALL DATE: October 2009 **YEARS OF SERVICE:** 8 years

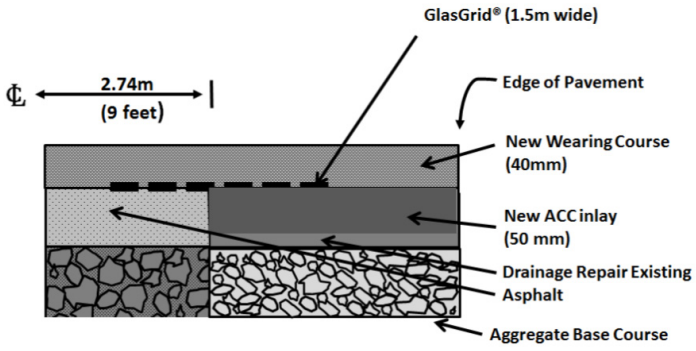
APPLICATION: High strength asphalt pavement reinforcement materials were utilized to address longitudinal construction joints located directly in the vehicular wheel path.

CHALLENGE: The repairs to Ontario Co. Rd. 41 in New York State resulted in two full depth construction joints located approximately 2.74m (9 ft) from centerline on each side of the road. The goal was to keep the 2.4km (1.5 mile) long construction joints over the wheel paths from becoming an ongoing maintenance challenge.

SITE CONDITIONS: The persistent drainage issues on both sides of Ontario Co. Road 41 necessitated that the outside sections be removed and replaced with a more effective drainage solution. While this reinstatement returned the pavement surface back to existing grade, it resulted in 2 longitudinal construction joints directly in each of the two right wheel paths. (Fig. 1)



(Fig. 1) Outer Edge of pavement following the drainage repair and prior to final repair showing the construction joint and settlement.



(Fig. 2) Outer Edge of pavement following final repair using GlasGrid® 8502

SOLUTION:

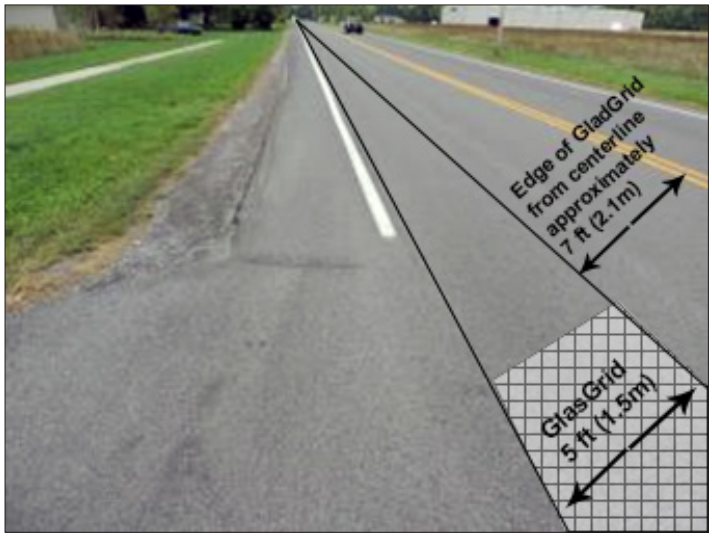
- Existing roadway section milled to remove 50mm (2 in) of the asphalt pavement and replace back to the existing grade in order to correct the cross fall.
- Installed GlasGrid® asphalt pavement reinforcement, centered over both construction joints 1.5m (5 ft) wide
- Placed and compacted 40mm (1.5 in) of wearing course asphalt over the full width of the pavement.

(Fig. 3) Road before GlasGrid® 8502 installation

(Fig. 4) Placement of GlasGrid® in preparation of the new wearing course.

GlasGrid® 8502 was selected to provide the necessary reinforcement over the construction joint to interrupt the crack progress to the surface. The strong tensile and high modulus characteristics of GlasGrid® contributed to the improved performance of the project by constraining the crack energy and redirected it horizontally, thereby adding life and longevity to the overlay while reducing future maintenance requirements.

PERFORMANCE: With over 8 years of service, the road is performing very well. GlasGrid® has provided the performance needed. The pavement that is reinforced with GlasGrid® is not showing any cracks, however, cracks have started to appeared along the centerline and edges of the roadway where there is not any GlasGrid® located. (Fig. 5)



(Fig. 5) Crack from edge of roadway is present across the shoulder area however it ends where the GlasGrid® is located

SYSTEM ADVANTAGES: Introduced in 1989, the GlasGrid® System consists of stiff environmentally friendly fiberglass material coated with an elastomeric polymer. The grid is rolled out over a thin leveling course placed before the main asphalt overlay. With it's pressure-sensitive, adhesive backing, installation of the GlasGrid® System for reinforcement is easy and generally considered the most expedient installed interlayer system available. GlasGrid® has been successfully used within asphalt overlays throughout the world to combat reflective cracking initiated by one or more of the following:

- Concrete pavement longitudinal and transverse joints
- Thermal loading
- Lane widening
- Cement treated or stabilized layer shrinkage cracks
- Block cracks
- Asphalt construction joints

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GlasGrid® is manufactured by Saint-Gobain ADFORS, an industry leader in the manufacture and distribution of a wide range of reinforcement fabrics. With worldwide manufacturing plants and a commitment to innovative solutions, Saint-Gobain ADFORS has over 100 years of experience to put to work for you.